INVESTIGATING THE BIDIRECTIONAL RELATIONSHIP BETWEEN HISPANIC PARENTAL EXPECTATIONS AND STUDENT ACADEMIC ACHIEVEMENT

A Dissertation

by

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ABSTRACT

Parental involvement has become a popular approach to addressing the achievement gap between various racial/ethnic groups. Given the burgeoning presence of Hispanic children in public schools, the purpose of this study was to examine the causal influences between one dimension of parental involvement, parental expectations, and academic achievement (measured by standardized and teacher-reported measures). A sample of 293 first-grade Hispanic students from a larger longitudinal study examining the impact of retention on academic achievement was included in the study. Cross-lagged and autoregressive path modeling tested causal associations between parental expectations and students' academic achievement over the course of three years. Differences were also examined among gender and English language learner (ELL) status.

Findings from this study indicate an inconsistent relationship between parental expectations and academic achievement, moderated by gender, achievement measure, and year of assessment. Specifically, results indicated a stronger relationship for male participants and for teacher-reported achievement indicators. More causal relationships were also noted in the later years of assessment. Additional analyses reveal Hispanic parents have lower educational expectations for ELLs than non-ELL students, regardless of academic abilities. Limitations, future directions, and study implications are discussed.

DEDICATION

I would like to dedicate this dissertation to my parents, Moises and Francisca Lagunas, who taught me the value of an education without having one themselves, and to work tirelessly for my dreams. I will never forget the sacrifices they made for our family. Thank you for all of your love, support and patience.

Quisiera dedicar esta disertación a mis padres, Moises y Francisca Lagunas, quienes me enseñaron el valor de una educación sin tener uno ellos mismos, y a trabajar incansablemente para lograr mis sueños. Nunca olvidaré los sacrificios que han hecho por nuestra familia. Gracias a los dos por todo su amor, apoyo y paciencia. Los quiero mucho, mamá y papá.

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER I

INTRODUCTION

Significance of the Problem

Since the beginning of the 21st century, the United States has seen a rapid growth of its Hispanic population (Bernstein, 2008; Rodriguez, Antrop-Gonzalez, & Reyes, 2006; United States Department of Commerce, 2006, 2012). Between 2000 and 2010, Hispanics accounted for more than half of the nation's population growth, with their population percentages increasing in all 50 states (Passel, 2011). It is estimated these growth trends will continue through the remaining half of the 21st century (Humes, Jones, & Ramirez, 2011; United States Department of Commerce, 2012), and Hispanics will continue to represent a large percentage of the nation's population. The burgeoning Hispanic population has been most evident and observed in the public school setting, where the number of Hispanic children enrolled has almost tripled since 1980 (Smith, Stern, & Shatrova, 2008).

The changing demographic of the public school system is of particular interest and concern to educators and policy makers as students of Hispanic ethnicity have experienced lower academic performance consistently compared to their Caucasian peers (Santiago, 2011). Across the years, a growing body of literature has documented the high rates of academic failure and school dropout among Hispanic youth in the United States (Altshuler & Schmautz, 2006; Chapman, Laird, Ifill, & Kewal-Ramani, 2011; National Center for Education Statistics [NCES], 2013; Santiago, 2011). As a

group, Hispanics have had one of the highest dropout rates among all minorities in the U.S. for the past 25 years (Ream & Rumberger, 2008).

These trends are concerning for various reasons, one of which is that as the largest minority in the nation, Hispanics continue to have one of the lowest educational attainment rates among all ethnic groups. Furthermore, Hispanic's college enrollment rates have not increased since the late 1970s (Nuñez, Sparks, & Hernandez, 2011).

Both academic failure and school dropout is caused by a multitude of reasons, including student, family, community, and school-related factors. While most of these risk factors are shared with other underachieving racial/ethnic groups, a large number of Hispanic students face the additional challenge of learning the English language. Based on data from the National Education Association (n.d.), Hispanics make up 80% of the nation's English language learners (ELLs), or students who are not yet proficient in English. Given that ELLs are expected to master the same classroom material as they acquire a new language, it is not surprising that Hispanic ELLs have higher rates of academic failure and school dropout than Hispanics who are proficient in English (Perie, Grigg, & Donahue, 2005). Perie and colleagues (2005) reported that about 28% of Hispanic ELLs meet or exceed 8th grade exams in reading, compared to 55% of Hispanic non-ELLs. Thus, while Hispanics as a whole are considered to be an at-risk group requiring attention and intervention to improve their educational outcomes, Hispanic ELLs are a group that requires more intensive support and research to identify factors that can help promote their academic achievement.

Given the importance of a well-educated workforce to maintain our nation's position as one of the most productive and competitive economies in the world, it is no wonder why educational policy makers have focused on ways to address the academic achievement gaps between Hispanic students and their Caucasian peers (Santiago, 2011). One of the most widely studied and targeted factors to addressing the achievement gaps between Caucasian and other ethnic/racial groups, including Hispanics, is to increase the level of parental involvement in their children's education. When the No Child Left Behind Act was passed in 2001, legislators were well aware of the importance of parental involvement and included a provision in the act mandating schools receiving federal funding be required to implement programs or offer services to build and improve home-school partnerships (United States Department of Education, 2004). These efforts are consistent with the idea that parents are responsible for their child's well-being and that parental involvement, particularly for ethnic and racial minorities, has positive impacts on academic achievement (Fan & Chen, 2001; Hill & Tyson, 2009; Jeynes, 2003, 2005, 2007; Wilder, 2014).

While the research has shown a positive link between levels of parental involvement and student academic achievement, the definition and dimensions of parental involvement have been inconsistent in the literature and educational policy (Fan & Chen, 2001; Hill & Tyson, 2009; Tveit, 2009). One of the most widely cited definitions of parental involvement is parent participation in the educational processes and experiences of their child, including parental aspirations and expectations for their children's academic achievement, parent-child communication, helping child with

school work, participation in school activities, parent-teacher communication, among other activities and practices (Epstein, 1995; Fan & Chen, 2001; Hill & Tyson, 2009; Jeynes, 2007; Logan, 2015; Wilder, 2014). The ambiguous operational definition of parental involvement makes it difficult to draw conclusions across studies when it is being assessed in an inconsistent manner.

Although parental involvement is made up of several parental behaviors and parenting practices, not all of its dimensions have equal impact on student academic achievement. Using different definitions of parental involvement, several meta-analyses have examined the differential impacts of various components of parental involvement on academic achievement (Erion, 2006; Fan & Chen, 2001; Hill & Tyson, 2009; Jeynes, 2003, 2005, 2007). Although all the meta-analyses did find a strong relationship between the general construct of parental involvement and academic achievement, these studies also found that among the parental involvement dimensions, parental expectations and aspirations, or the parents' convictions and goals (respectively) of their child's future achievement, held the strongest relationship to achievement than did the other forms of parental involvement. Furthermore, a meta-synthesis of several meta-analyses examining the relation between parental involvement and academic achievement found that some dimensions of parental involvement (e.g., homework assistance) were shown not to have any impact on academic achievement, whereas the strongest relationship was found when parental involvement was defined as parental expectations and aspirations (Wilder, 2014). These findings provide strong evidence that while parental expectations are strongly linked to student achievement and highlight

that among the dimensions of parental involvement, parental expectations and aspirations are vital in improving children's academic achievement outcomes.

Despite the strong evidence supporting the importance of parental expectations on academic achievement, there is a documented paucity of literature examining the nature of the relation on particular populations, including racially and ethnically diverse populations (Goldenberg, Gallimore, Reese, & Garnier, 2001). Most of the research examining the relationship between parental expectations and academic achievement has used Caucasian samples. Although six of the nine meta-analyses in the meta-synthesis by Wilder (2014) investigated the moderating effects of race on parental involvement and academic achievement, none looked at the specific effects on the dependent outcome in Hispanics. Given the documented rates of academic failure and dropout rates of Hispanics, it is important that researchers consider the relationship between parental expectations and academic achievement to better understand the factors contributing to school success.

In addition to the research gap on the influence of parental expectations on the academic achievement of Hispanic and other minority populations, limited research exists that investigates the directionality of the relationship between these two variables over time (Goldenberg et al., 2001; Zhang, Haddad, Torres, & Chen, 2011). Existing literature has only examined the relationship between these constructs in cross-sectional or short-term longitudinal studies, restricting these studies' abilities to detect changes and patterns in the variables of interest (Farrington, 1991). Furthermore, the majority of current research examines how parental expectations directly influence the student's

academic achievement, but research has only begun to examine the bi-directional relationship and how academic achievement impacts parental expectations (Goldenberg, et al., 2001; Mistry, White, Benner, & Huynh, 2009; Zhang et al., 2011).

One of the few studies investigating the bi-directionality of parental expectations and academic achievement was a longitudinal study by Goldenberg et al. (2001), in which two contrasting unidirectional models were tested. One model focused on the impact of parental aspirations and expectations' on students' performance; the alternative model examined students' performance on parental aspirations and expectations. The study's findings supported the performance-driven model (the latter model), suggesting that student academic performance and parental expectations are interrelated, simultaneously impacting one another. Unfortunately, the sample in that study was limited to children of Hispanic immigrants, who tend to have higher and more invariant expectations and than non-immigrant Hispanics (Fuligni, 1997; Kao & Tienda, 1995). Considering the heterogeneity of the U.S. Latino population, it is important that researchers also examine these relationships in more heterogeneous Hispanic populations. Altogether, given the nation's emphasis on parental involvement, and its various constituents including parental expectations, it is important that to examine alternative models. In doing so, we gain a further understanding on how these variables may or may not be interrelated and their direct and indirect influences on each other.

Statement of the Problem

Although the literature has consistently emphasized the importance of parental expectations, there has been little research on the bi-directional relationship between

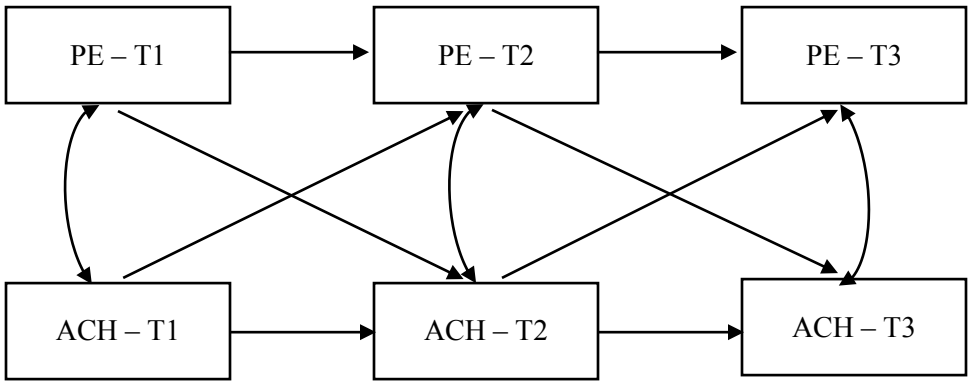
parental expectations on student academic achievement (Zhang et al., 2011). Current literature has primarily focused on the direct effects of parental expectations on academic achievement with few studies examining the impact of achievement on parental expectations, particularly those in the elementary years. Thus, further research is needed on the bidirectionality of the variables' influence over time to better inform interventions targeting the achievement gap affecting various at-risk populations. Given most of the research in this area has not included individuals of Hispanic origin or other ethnically and racially diverse individuals, this study will provide additional insight to help address the achievement gap between Hispanics and Caucasian students. This study will also contribute to the knowledge on academically at-risk populations, given all participants were part of another study examining the impacts of retention on academic achievement.

Purpose of the Study

The purpose of this study is to fill a gap in the literature by investigating factors that influence Hispanic parental expectations, one of the most influential dimensions of parental involvement, as well as academic achievement of their children. This study aims to provide evidence on the potential impact that previous academic achievement has on parental expectations over three years, beginning in the first grade (see Figure 1). This study also investigates factors that contribute to the academic success of a population considered to be high risk of academic failure and school dropout. Furthermore, findings from the study may assist schools and educational policy makers

in designing parental involvement initiatives to address the needs of Hispanic parents, particularly those with academically at-risk children.

Figure 1
Conceptual Model of Bidirectional Relationship of Parental Expectations and Academic Achievement



Research Question 1

What is the degree of association between parental expectations and achievement (measured by teacher-reported and standardized measures) for Hispanic students who participated in Project Achieve at concurrent points in time? It is hypothesized that there will be moderate correlation between the variables at concurrent time points for Hispanic students.

Research Question 2

Since the sample is comprised of both ELL and non-ELL Hispanics, to what extent do Hispanic ELLs differ on the dimensions of parental expectations from non-ELL Hispanics? Given the research in this area, it is believed that parents of ELLs will have higher initial levels (Time 1) of educational expectations, but these differences will

decrease over time at a higher rate in response to the academic difficulties encountered by ELLs early on.

Research Question 3

Do parental expectations predict or account for variance in students' academic achievement over time based on students' prior academic performance for ELL and non-ELL participants? It is believed that the parental expectations of both groups will predict changes in academic achievement in subsequent years, but that previous academic achievement will also serve to predict future expectations. Consistent with the study by Goldenberg and colleagues (2001), it is hypothesized that prior academic performance will more strongly influence parental expectations than the effects of expectations on achievement (i.e., the "performance-driven model").

Research Question 4

If teacher-reported and standardized achievement measures are found to support a one-factor achievement model, would separate analyses indicate that the relationship between parental expectations and academic achievement varies between the two indicators? It is theorized that a stronger correlation will be found between parental expectations and teacher-reported achievement compared to the correlation with the standardized achievement measure. Because teacher-reported achievement is more likely to be consistent with the academic feedback given to parents, it is believed it will have a stronger influence on their educational expectations of their student.

Definition of Key Terms

Academic Achievement. The term academic achievement is a broad construct considered to be a benchmark of academic progress, usually measured by grade point average or performance on standardized measures.

English Language Learner (ELL). An English language learner is a student who typically comes from a non-English speaking home/background and has limited English proficiency. This term is often used interchangeably with Limited English Proficient (LEP) (Texas Education Agency, 2012).

Hispanic. The term Hispanic is used to identify individuals of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish cultures, regardless of race (Humes et al., 2011). This term is often used interchangeably in the literature with the term Latino.

Parental Aspirations. Parental aspirations refer to parents' desired levels of performance (Spera, Wentzel, & Matto, 2009). This dimension tends to be more idealistic than parental expectations.

Parental Expectations. Parental expectations are parent's beliefs of their student's performance in school and the educational level their child will obtain (Areepattamannil & Lee, 2014). This term should be distinguished from parental aspirations, which is a less realistic construct.

Parental Involvement. Parental involvement is a wide range of parental behaviors and parenting practices intended to promote their student's educational success (Hill & Tyson, 2009).

CHAPTER II

LITERATURE REVIEW

Hispanics in the United States

Since the 1970s, immigration to the United States (U.S.) has increased dramatically, with the most growth occurring within the past few decades. According to Brown and Patten (2012), there has been an influx of over nine million foreign-born residents between 2000 and 2012, corresponding to a two percent increase of the total U.S. population. Among our immigrant populations, Hispanics have accounted for the largest group; it is estimated that about 43 percent of immigrants who arrived in 2012 are of Hispanic origin (Brown & Patten, 2012). Given the high number of Hispanic immigrants, it is not surprising they are also the largest minority group, representing 16 percent of the total U.S. population (U.S. Department of Commerce, 2010). Using anticipated growth rates, it is projected that by the year 2050, the Hispanic population will have increased from approximately 60 million to just under 120 million, almost double their current population (Humes et al., 2011).

Overall, the Hispanic population is relatively young. According to the U.S. Department of Commerce (2006), the median age for Hispanic women is 28 years compared to 38 years for all women in the U.S.; the averages for men are 27 and 35 years (respectively). Data published by the U.S. Department of Commerce (2006) also indicates that 35% of the Hispanic population is under the age of 18. These figures indicate a significant portion of the burgeoning Hispanic population is of school age,

supported by recent estimates that they comprise 24% of the total public school enrollment (Fry & Lopez, 2012).

The increasing number of Hispanic students is worthy of special attention given their relatively high dropout rates, approximately four times the rate of their White counterparts (Altshuler & Schmautz, 2006; Chapman et al., 2011; NCES, 2013; Santiago, 2011). In terms of educational attainment, students of Hispanic origin tend to obtain lower scores on standardized tests, are less likely to graduate from high school, and attend postsecondary education at lower rates than non-Hispanics (Altshuler & Schmautz, 2006). Specifically, 4th and 8th grade students of Hispanic descent obtained lower scores than Caucasian students on the 2007 National Assessment of Educational Progress in both reading and math (Planty et al., 2009). Among adults 25 years or older, only 13% of Hispanics have attained at least a bachelor's degree, compared to 39% of non-Hispanic Whites (Fry & Lopez, 2012). Overall, Hispanics face a number of risk factors that serve as barriers to their educational success, including economic disadvantages, limited English proficiency, siblings who dropped out of school, parent(s) who did not graduate from high school, and parents without a postsecondary experience (Bourdieu, 1973; Schneider, Martinez, & Owens, 2006).

English language learners (ELLs)

In addition to the growing presence of the Hispanic and other immigrant populations in the country, there is a corresponding rise of households who speak non-English languages, the most common of these languages being Spanish (Ryan, 2013). Given the increase of immigrants who do not speak English and projected upward trend

of Hispanics in the country, we should expect to see a continuous increase in the number of individuals learning to speak English, also known as English language learners (ELL). In particular, the growth of Spanish-speaking ELL school-age students has seen continuous growth in rates since 1979 (Planty et al., 2009). Approximately 79 percent of the ELL populations are from Spanish-speaking families (Soto, Ariel, Hooker, & Batalova, 2015). Among the school-age population, the number of ELL enrolled in public schools in 2011-2012 was an estimated 4.4 million, an increase from the 4.1 million reported in the 2002-2003 school year (Kena et al., 2014). Within this same period, 40 of the 50 states saw a rise in the percentage of ELL student population, with some of the highest growths occurring along the U.S.-Mexico border and West coast (Kena et al., 2014). Given that a high density of the Hispanic population resides in these areas, these findings provide further support for the idea that ELL will continue to maintain a relevant position in the public school system as their representation in the schools continues to increase (Planty et al., 2009).

While some studies portray Hispanics as a homogenous population, in reality they are a highly heterogeneous group with diverse nationalities, backgrounds, language proficiencies, and generation status (Yamamoto & Holloway, 2010). Although the majority of first-generation Hispanic immigrants constitute ELLs, children from other (e.g., 1.5, second, third) generations also contribute to the ELL populations. In fact, it is estimated that less than half of the nation's ELLs are first-generation immigrants (Capps, Fix, Murray, Ost, Passel, & Herwantoro, 2005). Capps et al. (2005) also reported that second-generation (having at least one immigrant parent) and third-generation (having at

least one immigrant grandparent) Hispanic students constitute 59% and 18%, respectively, of the nation's elementary ELL population; in grades 6-12, these rates converge to 27 percent for second-generation and 29 percent for third-generation. As Hispanic youth continue to age and larger numbers of later-generation Hispanics (e.g., second, third) enroll in the school system, the importance of focusing on this heterogeneous population will become more pronounced.

Many ELLs of Hispanic descent have academic difficulties as they attempt to simultaneously learn a new language and master the subject content being covered at school (Bourdieu, 1973). These difficulties are most evident in the comparison of academic outcomes of ELLs to their English-proficient peers. Hispanic ELLs meet or exceed their 8th grade reading exams at about half the rate of English-proficient Hispanics, 28% and 55%, respectively (Perie et al., 2005). Nonetheless, both of these groups have significantly lower rates than their Caucasian peers, of whom 82% met or exceeded a basic level of reading in 8th grade (Perie et al., 2005). These statistics are alarming considering the large numbers of Hispanics in the public school system, and their growing importance in the work force. In order to meet President Obama's goal of making the U.S. the world leader in education by the year 2020, it is projected that a 50% increase is needed in the number of college graduates (Kelly, Schneider, & Carey, 2010). To meet this goal, it is important that Hispanic children, particularly those who are ELL, improve their academic outcomes to prepare them for higher levels of education. Particular focus should also be targeted toward the early school years, where academic interventions are generally more effective than later in the student's

educational career. While it is likely Hispanics will continue to play a significant role in the nation's population and economy, their current levels of academic performance will require additional efforts to improve educational outcomes and increase their college enrollment rates.

Overview of Parental Involvement

Both schools and parents have long been regarded as important stakeholders in children's academic success. Over the last two decades, parental involvement has become a more widely accepted and effective method to increasing students' academic achievement (Wilder, 2014). This has created an ever-growing push from the U.S. Department of Education for schools to increase involvement between themselves and the families and communities they serve, evidenced by the introduction of a specific provision on parental involvement in the No Child Left Behind (NCLB) Act of 2001 (U.S. Department of Education, 2004).

Although the provision in the NCLB Act of 2001 defines parental involvement as "the participation of parents in regular, two-way, and meaningful communication involving student academic learning and other school activities" (U.S. Department of Education, 2004, p. 3), parental involvement has been defined in numerous ways throughout the literature (Epstein, 1987; 1995; Fan & Chen, 2001; Hill & Tyson, 2009; Hong & Ho, 2005; Keith & Lichtman, 2004). While many studies have used more generalized definitions of parental involvement (Epstein, 1987; 1995; Hill & Tyson, 2009; Hong & Ho, 2005; Hoover-Dempsey & Sadler, 1995; 1997; Wilder, 2014), others have focused on the specific dimensions of parental involvement, including parental

interests and beliefs on education, home-school communication, active participation in schools, and parental expectations and aspirations of their child's educational attainment (Fan & Chen, 2001; Goldenberg et al., 2001; Hill & Tyson, 2009; Wilder, 2014; Zhang et al., 2011).

While some research has shown the important role that parental involvement has on several indicators of student achievement, including grade point average (GPA; Desimone, 1999; Goldenberg et al., 2001; Jodl, Michael, Malanchuk, Eccles, & Sameroff, 2001; Seyfried & Chung, 2002), standardized test scores (Benner & Mistry, 2007; Gill & Reynolds, 1999; Goldenberg et al., 2001; Reynolds & Gill, 1994), and scores on national assessments (Goldenberg et al., 2001; Hill et al., 2004), other researchers have found negligible differences (Bronstein, Ginsberg, & Herrera, 2005; Keith, Reimers, Fehrmann, Pottebaum, & Aubey, 1986). It is believed that the inconsistency of the operationalization and measurement of academic achievement has led to competing evidence regarding the impacts of parental involvement.

In addition to the overall impact of parental involvement, there are also disaggregated findings of its impact across racial/ethnic groups. A study by Hill et al. (2004) found that the relationship between parental involvement and academic achievement was strongest for African Americans, which challenge the findings by Seyfried and Chung (2002), who found a weaker relationship for African Americans compared to their Caucasian peers. Meta-analyses in this area of literature have also resulted in mixed findings, with some supporting a positive relationship between parental involvement of various ethnic groups (Jeynes, 2007), and others finding

negligible differences (Fan & Chen, 2001). Moreover, these results indicate inconsistency in the findings related to parental involvement and student academic achievement. Although there is an abundance of literature examining the impacts of parental involvement on ethnic groups, additional research is necessary to clarify the relationship between these two constructs across racial/ethnic groups. Furthermore, the majority of the literature has been limited to brief interval time points, and therefore has not examined the relationship throughout the child's education.

A recent meta-synthesis by Wilder (2014) sought to identify generalizable results of the relationship by synthesizing the findings from nine meta-analyses examining parental involvement and academic achievement. Although the meta-synthesis found an overall positive impact between parental involvement and academic achievement, how the construct was defined (e.g., help with homework, parental expectations, supervision in the home) influenced the effect size (Wilder, 2014). The meta-synthesis yielded the strongest relationship when parental involvement was defined as parental expectations of the academic achievement of their children, whereas other dimensions of parental involvement, such as homework involvement and home supervision, yielded no relationship to students' academic achievement. These results indicate that specific dimensions of parental involvement (i.e., parental expectations) may have more positive impacts on academic achievement. Furthermore, the results of the meta-synthesis also suggest this positive relationship is consistent across ethnic groups and age, but the strengths of these relationships vary based on the indicators of academic achievement used (e.g., GPA, standardized test scores). The last findings also add to the previous

literature concerning the lack of consistency in academic indicators used in studies examining the link between parental involvement and achievement (Fan, 1997; Fan & Chen, 2001). Thus, it is speculated that the lack of consistency in findings related to the outcomes associated with parental involvement is related to the multifaceted dimensions of parental involvement and variations in the indicators of academic achievement used in previous literature (Fan & Chen, 2001).

Theoretical Frameworks of Parental Involvement

Research on parental involvement has been fragmented due to the changing and development of guiding theoretical frameworks (Fan & Chen, 2001). Over the past 30 years, the models on parental involvement have been modified, and thus, have different definitions of the construct. One of the most widely accepted frameworks of parental involvement was created by Joyce Epstein (1987, 1995). This typology emphasized the importance and responsibilities of the family, school, and community in educating children, and her earliest model identified four specific ways in which schools could help parents become more involved in their child's education. These four types of parental involvement in Epstein's model include: (a) basic obligations, (b) parent-school communication, (c) parent involvement at school, and (d) parent learning at home, (Epstein, 1987). The model has since expanded to define six strategies: (a) helping with parenting, (b) communication, (c) volunteering, (d) learning at home, (e) decision-making, and (f) collaborating with community (Epstein, 1995).

Another widely cited model on parental involvement was created by Hoover-Dempsey and Sadler (1995, 1997). This comprehensive theoretical framework identifies

the process of how parents can become involved using a five-tier model. In Level 1, the parent's decision to become involved in influenced by their perceived self-efficacy, construction of parental role, and general opportunities of parental involvement. In Level 2, the parent's choice of involvement type is influenced by their skills/knowledge, consideration of time/energy demands, and invitations to become involved by children or school personnel. In Level 3, the mechanisms by which parental involvement influence student outcomes include modeling, reinforcement, and instruction. In Level 4, parents utilize more developmentally appropriate strategies and have expectations better matched to their involvement. Lastly, at Level 5, student's academic outcomes become the parent's main concern, regardless of other responsibilities (Hoover-Dempsey & Sadler, 1995, 1997). While this model shows promise, the operational definitions and measurement of the five dimensions remain unclear, thus contributing to the fragmented definition of parental involvement in the literature.

Hispanic Parental Involvement

The disaggregated findings on the impact of parental involvement on achievement has also been documented among Hispanic families, whose culture differs from the mainstream American culture. Because parental involvement has been largely defined by what schools perceive as important while largely ignoring parents' perspectives, this has created limitations for its implications across many populations (Goodwin & King, 2002). This is even more true for ethnic and racial minorities in the United States, as suggested by Bourdieu's (1973) theory of cultural capital and its manifestation in the educational system. This widely cited theory speculates that

parental involvement and children's academic success in the school is strongly dependent on the compatibility between the home and school cultures (Bourdieu, 1973). Because the cultural capital in the education system is more matched to the beliefs held by middle-class White parents (Goodwin & King, 2002; Kim, 2009; Lareau, 1987; 1996; Li, 2006), these parents are at an advantage at becoming more involved in their child's education and advancing their child's academic achievement. Their advantage also means that other groups, including lower class and the middle class minorities are at a disadvantage, thus ultimately reproducing the social class structure in the educational system (Kim, 2009, Lareau, 1987; 1996; Li, 2006).

Although these cultural norms seem firmly entrenched in the education system, there is a pressing need for schools to identify more culturally responsive forms of parental involvement so children of diverse backgrounds can also reap the educational benefits from parental involvement. Over the years, the majority of research on Hispanic parental involvement has focused on negative outcomes, such as academic failure and high school dropout rates, while studies investigating factors linked to academic resiliency are scarce (Logan, 2015; Niemeyer, Wong, & Westerhaus, 2009). Studies that recognize and focus on existing strengths, such as parental involvement, provide more effective interventions with more sustainable results (Smith, 2006) than those that focus on needs and problems. Nonetheless, more research is needed to further investigate the dimensions within parental involvement in the Hispanic population to promote academic success of this at-risk student population.

Parental Expectations

Expectations, or one's convictions and goals of future achievement, have long been a focus of attention in the research largely because of the established link to academic achievement (Benner & Mistry, 2007; Desimone, 1999; Galindo & Sheldon, 2012; Goldenberg et al., 2001; Jodl, et al., 2001; Seyfried & Chung, 2002; Eccles & Wigfield, 2002; Zhang et al., 2011). In particular, two of the most researched topics in this area have examined the impact of teachers' expectations on academic achievement (Benner & Mistry, 2007; Reynolds & Gill, 1994; Rivera, 2012) and parental expectations on student achievement (Areepattamannil & Lee, 2014; Benner & Mistry, 2007; Bronstein, Ginsberg, & Herrera, 2005; Desimone, 1999; Jodl, et al., 2001; Seyfried & Chung, 2002; Zhang et al., 2011). The abundance of studies researching the influences of parents and teachers' expectations is indicative of the perceived importance of their roles on children's educational outcomes, highlighting the role of the ecological system on the education of children.

Although many researchers have attempted to understand the mechanism by which parent and teachers' expectations influences students' academic achievement, one of the most widely accepted models is the expectancy-value theory of achievement (Eccles, 1983; Eccles, Wigfield, & Schiefele, 1998; Eccles & Wigfield, 2002). This comprehensive model was an extension of Atkinson's (1964) original expectancy-value framework, linking achievement, persistence, and choice to an individuals' own expectations and values related to that task (Eccles & Wigfield, 2002). Atkinson's (1964) original theory of achievement motivation postulated that three things were

needed to motivate an individual to succeed: (a) the need to succeed or need achievement; (b) perceived estimate of likelihood of successfully performing the task; and (c) the incentives for completing the task. Eccles, Wigfield, and Schiefele (1998) expanded the Atkinson's model to further elaborate the expectancy and value components and broaden the scope of psychological and social/cultural influences. Lastly, their model assumed expectancies and values were positively related to each other, rather than inversely as proposed by Atkinson's model (Eccles & Wigfield, 2002; Eccles et al., 1998).

The theory of academic achievement espoused by Eccles and Wigfield (1998) presumes that achievement and achievement-related decisions are most proximally determined by anticipation of success, identity, and perception task value. In this model, both expectations and value are influenced by task-specific beliefs including the individual's perceptions of competence, difficulty of task, short and long-term goals, and self-schema. Most importantly, the model speculates that the development of goals and self-schemas are influenced by perceptions of others' attitudes and expectations for them, affective memories, behaviors and beliefs of socializing agents, and previous achievement-related experiences (Eccles & Wigfield, 2002; Eccles et al., 1998). This theory suggests that other individuals (e.g. parents, teachers, peers) interact with the cultural environment to shape one's perception of abilities, competence, and goal formation.

Consistent with the model by Eccles and Wigfield (1998), many studies in this field support a positive relationship between parental expectations and students'

academic achievement (Benner & Mistry, 2007; Fan & Chen, 2001; Galindo & Sheldon, 2012; Seyfried & Chung, 2002; Wilder, 2014). In addition to the findings supporting the association between the two variables, other studies have also suggested that of the components within parental involvement, parental expectations is one of the strongest predictors of achievement (Gill & Reynolds, 1999; Hill & Tyson, 2009; Hoge, Smit, & Crist, 1997; Hong & Ho, 2005). From these studies, it is apparent that higher parental expectations are associated with better student academic performance and thus should be focused on by parental involvement and education programs (Suizzo et al., 2012). Nonetheless, the literature on parental expectations is very limited by studies focusing on the impacts across few time intervals (Fan & Williams, 2010; Galindo & Sheldon, 2012; Jodl et al., 2001; Keith & Lichtman, 1994; Suizzo et al., 2012), or those utilizing cross-sectional or short-term longitudinal techniques, thereby restricting the studies' ability to detect changes and patterns in the variables of interest (Farrington, 1991). Few studies have looked at the relationship between expectations and achievement across time (Areepattamannil & Lee, 2014; Mistry et al., 2009). Thus, the limited methodology of existing literature currently restricts the understanding of the relationship between these two variables of interest over the course of their educational careers.

A key aspect of the model by Eccles et al. (2002) reflects a bidirectional relationship between socializers' (e.g., parents, teachers) beliefs and behaviors and student's previous academic experiences. This model speculates that parents and teachers modify their own beliefs (including educational expectations) according to the students' previous performance in these areas, thus developing a more realistic

perception of their child's educational outcomes based on previous academic achievement. This suggests that parental expectations are influenced by previous academic feedback, most commonly obtained through progress reports or through interactions with teachers. The model also speculates that teachers' beliefs change as they evaluate each child's performance on homework assignment and classwork.

Furthermore, while most studies have focused on the unidirectional relationship between parental expectations and academic achievement (e.g., Fan & Chen, 2001; Galindo & Sheldon, 2012; Hong & Ho, 2005; Keith & Lichtman, 1994; Seyfried & Chung, 2002), few studies have investigated the bidirectional relationship between these two variables (Goldenberg et al., 2001; Mistry et al., 2009; Zhang et al, 2011). Examining how these two variables influence each other over time is important to highlight the bidirectional link between previous achievement-related experiences and socializer agents' behaviors and beliefs as suggested by the expectancy-value theory of achievement (Eccles & Wigfield, 2002). Such research investigating how previous achievement influences parental expectations would be particularly informative to the understanding of how parental involvement programs play out in academic development of children (Mistry et al., 2009).

A study by Zhang and colleagues (2011) is one study that has investigated the hypothesized bidirectionality of the students' previous achievement on both students' and parents' expectations (and vice versa). Using a large nationally representative sample from the National Education Longitudinal Study of 1988, the researchers obtained data across from 8th grade until two years after high school graduation.

Findings from the Zhang et al. (2011) study indicated that there was a reciprocal (bidirectional) impact between parental expectations and academic achievement. In other words, both parents' and students' expectations predicted academic achievement, while previous achievement also predicted parents' and students' expectations. It was noted that students' expectations, parents' expectations, and academic achievement were relatively stable across time, which may be attributable to the more stable trajectories of achievement in later school years (Bloom, 1964). Therefore, additional studies are needed to explore this relationship beginning in early school years to obtain a better understanding of how expectations and achievement are related across students' educational career.

Hispanic Parental Expectations

Until recently, the majority of the research regarding parental expectations and academic achievement had been studied using predominately Caucasian samples (Seyfried & Chung, 2002). Studies of parental expectations in diverse populations have shown mixed results. While some studies indicate that the relationship is stronger for across different ethnic and racial groups (e.g., Hill et al., 2004; Suizzo & Stapleton, 2007), others have found a weaker association (e.g., Jodl et al., 2001; Seyfried & Chung, 2002). Even meta-analysis that have compiled data from various studies to examine the differences in the relationship between parental expectations and academic achievement have inconsistent findings (Fan & Chen, 2001; Jeynes, 2003) or have not examined the relationship among Hispanics (Hill & Tyson, 2009; Jeynes, 2003).

Among the studies on parental expectations in diverse populations, researchers have paid particular interest to the trends among Asians and African Americans (Gill & Reynolds, 1999; Jeynes, 2002; Seyfried & Chung, 2002), with surprisingly few studies focusing on Hispanic samples (Goldenberg et al., 2001; Trusty, Plata, & Salazar, 2003; Zhang et al., 2011). Only three studies were found to utilize a longitudinal data set of Hispanic youth (Goldenberg et al., 2001; Trusty et al., 2003; Zhang et al., 2011), and only two of these (Goldenberg et al., 2001; Zhang et al., 2011) have examined the directionality (i.e., uni- bi-) of the relationship between parental expectations and student academic achievement. The paucity of studies on Hispanic parental expectations is most evident in Jeynes' (2003) meta-analysis on parental involvement's effects on achievement, where the moderating effect on Hispanics was not analyzed due to the lack of studies examining this population. The limitations of the research in this area are surprising given the rapid growth of the Hispanic population and the need to investigate factors that contribute to their youth's educational development.

A study by Goldenberg and colleagues (2001) is one of the few that has examined the bidirectional relationship between parents' expectations student academic achievement in Hispanic children. They tested two models to assess whether the relationship followed an "expectations-driven model," where expectations influenced achievement and an "achievement-driven model," where achievement influenced expectations. Their findings indicated the association between children's academic achievement and parental expectations were initially unrelated but increased gradually over time, and that achievement influenced parental expectations, but not vice versa

(Goldenberg et al., 2001). Thus, these results lend support for a unidirectional, achievement-driven model.

The study by Goldenberg et al. (2001) also made a unique contribution by focusing on parental beliefs in a sample of Spanish dominant child-parent dyads. Given that Hispanic ELLs tend to have lower academic achievement, the study's findings that parental expectations fluctuate according to child's performance may suggest that the expectations for this group decrease at a faster rate than English proficient Hispanic parent-child dyads. To date, no study has examined the link between the two variables of interest given a child's language proficiency status (i.e., ELL versus non-ELL). Two of the three studies (i.e., Trusty et al., 2003; Zhang et al., 2011) that investigated the influence between parental expectations and academic achievement in Hispanic populations were more focused on the ethnicity did not explore the moderating variable of English language proficiency. As previously mentioned, given that English language learners have encountered more barriers to academic success compared to their English proficient Hispanic counterparts, it is important to consider how parental beliefs change in their children's first years of schooling.

The unidirectional model supported by Goldenberg and colleagues was recently challenged by another study by Zhang and colleagues (2011). Using a national longitudinal dataset, the study also sought to investigate the directionality (i.e., uni-, bi-) of the relationship between parental expectations and academic achievement across various ethnicities (Asians, Hispanics, African Americans, Whites). The results in this study did indicate a bidirectional relationship, meaning that parental expectations

predicted students' academic achievement and previous achievement predicted parental expectations (Zhang et al., 2011). A comparison of the ethnicities of interest indicated the association between student achievement and parental expectations was stronger among White students (Zhang et al., 2011), suggesting ethnic differences in the relationship between the two constructs. Though the study did utilize a longitudinal approach, the sample was limited to adolescents from 8th to 12th grade. Lastly, neither study by Goldenberg et al. (2001) and Zhang et al., (2011) examined ELL status as a potential moderator in their studies. Nonetheless, the conflicting evidence on the relationship between parental expectations and students' academic achievement among Hispanics may be the result of the paucity of research in this area; therefore, it is important that additional studies further examine this topic to better understand the link between the two variables of interest.

CHAPTER III

METHODS

This study was a quantitative, retrospective research project using a pre-existing longitudinal data set with child achievement measures, demographic information obtained from school records, parents' educational expectations for their child, and teacher-reported achievement. The purpose of this study was to investigate the bidirectional impact of parental expectations on achievement of Hispanic students. The participants of this study did not participate in any randomized or experimental conditions; as a result no adverse events were expected. Approval for the original study, as well as the use of the data for this study, was obtained from the Texas A&M Institutional Review Board (IRB).

Participants

The students and parents included in this study were drawn from an existing database of 784 students participating in a longitudinal study on the effects of grade retention on academic achievement. The participants in this longitudinal study were recruited over two sequential cohorts in the fall of 2001 and fall of 2002, from one of three public school districts in southeast Texas. Two of these districts were located in small cities; the third one was in an urban setting. First grade students in the three districts were eligible to participate in the study if they (a) scored below the median on a standardized statewide assessment of literacy administered in the first grade, (b) had not previously been retained in the first grade, and (c) were not receiving any special education services. Based on this criterion, the participants in the larger study were

considered academically at-risk students. Of the eligible students, 1,200 parents returned consent forms with 784 (65.3%) providing positive consent. No differences have been found between children with consent to participate and children without consent on age, economic adversity status, gender, ethnicity, family language, language status (i.e., limited English proficiency) and district-administered literacy test scores (Wilson & Hughes, 2006).

Considering the study's interest in the relationship between parental expectations and academic achievement among Hispanic students, participants were excluded if not identified as Hispanic by demographic records or missing all three assessment waves of Years 1-3. Of the 784 eligible students in the longitudinal study, 295 Hispanic children had written consent to participate in the study, and two of the participants relocated before any assessments were conducted and were thus excluded from the analyses. Of the 293 eligible participants, 77 had complete data on all variables assessed and 216 were missing one or more items on an analysis variable. No differences were found between participants excluded due to missing data on demographic variables of gender, free reduced lunch status, and ELL status assessed at Time 1.

As seen in Table 1, the sample consisted of 293 Hispanic participants, with 153 (52%) male and 140 (48%) female participants. At the start of their first grade school year, the mean age of student participants was 6.57 years (SD=0.39). Approximately 82% of participants with parental consent at Year 1 were eligible for reduced or free lunch. Average scores (and standard deviations) on the WJ-III ACH and teacher-reported Academic Competence Scale (ACS) at Year 1 were 449.12 (19.21) and 4.14

(1.40), respectively. Average reported parental expectation at Time 1 for Hispanic participants was 7.36, indicating an expected level of education between associates and bachelor's degree. Examination of language status revealed that nine participants changed language status (indicating higher proficiency in English than Spanish, as measured by a language survey) between Years 1 and 3; eight of these children changed in Year 2 while one participant became more proficient in English in Year 3.

Table 1
Descriptive Statistics for All Participants and by Gender

Participants (N = 293)		**Females** (N = 140)		**Males** (N = 153)	
Variable	**Mean (SD)**	**Mean (SD)**	**N**	**Mean (SD)**	**N**
AGE	6.57 (.39)	6.54 (.38)	140	6.61 (.32)	153
ECON	.82 (.39)	.76 (.42)	136	.87 (.34)	146
WJACAD1	449.12 (19.21)	451.05 (20.19)	134	447.35 (13.26)	145
TRACAD1	4.14 (1.40)	4.18 (1.42)	129	4.09 (1.39)	131
PE1	7.36 (1.40)	7.17 (2.60)	94	7.53 (2.23)	105
WJACAD2	468.94 (13.10)	469.90 (12.85)	125	468.03 (15.55)	133
TRACAD2	4.31 (1.28)	4.37 (1.20)	104	4.27 (1.33)	117
PE2	7.41 (1.28)	7.60 (2.27)	100	7.24 (2.33)	116
WJACAD3	482.23 (12.10)	482.70 (11.01)	115	481.83 (12.94)	134
TRACAD3	3.93 (1.38)	4.09 (1.24)	100	3.77 (1.49)	102
PE3	7.59 (1.38)	7.83 (2.10)	93	7.37 (2.19)	103

Note. AGE = children's age in years. ECON = children's economic adversity status at grade 1 (covariate; 1 = economically disadvantaged; 0 = not economically disadvantaged). WJACH= academic composite from WJ-III or Batería-R. TRACAD = teacher-rated achievement from Academic Competence Scales. PE = parental expectations.
* $p < .05$; ** $p < .01$

Measures

Demographic variables. Information regarding students' gender, race/ethnicity, and familial economic adversity status in first grade was obtained from school district

records. Eligibility for free or reduced lunch during first grade was used as an indicator of the student participants' economic adversity status.

Academic achievement. The Woodcock-Johnson Tests of Achievement, Third Edition (WJ-III ACH; Woodcock et al., 2001) is an assessment instrument with individually administered and norm-referenced tests that measure academic achievement for individuals ages 2 to adulthood. In this study, student participants' WJ-III ACH Broad Reading W scores and their WJ-III ACH Broad Math W scores were used. The subtests included in the WJ-III ACH Broad Reading W scores are Letter–Word Identification, Reading Fluency, and Passage Comprehension subtests, while the WJ-III ACH Broad Math W scores were based on Calculations, Math Fluency, and Applied Problems subtests. Extensive research supports both reliability and construct validity of the WJ-III ACH (Woodcock et al., 2001).

Participants more proficient in Spanish than English based on the Woodcock-Muñoz Language Survey (WMLS; Woodcock & Muñoz-Sandoval, 1993, 1996) were administered the equivalent tests in Spanish tests from the Batería Woodcock-Muñoz Pruebas de Aprovechamiento – Revisada (Batería-R APROV; Woodcock & Muñoz-Sandoval, 1996). At the time the study began, the Batería-III (Muñoz-Sandoval, Woodcock, McGrew, & Mather, 2005) was not yet available. Once it was released, research assistants administered both the Batería-R and Batería-III to a random sample of 31 bilingual participants to assess association. The two measures were highly correlated (r = .95) for both Broad Reading and Broad Math, suggesting that scores across the WJ-III and Batería-R are comparable in our sample. In this study, students

with a Hispanic surname or ethnicity status (indicated in school records or parent questionnaire) or currently enrolled in a bilingual class were administered the WMLS; if tested as equal or higher proficiency in English for two consecutive years, they were no longer administered the WMLS.

Because teacher-reported indicators are commonly used in making educational decisions and providing feedback to students and parents (Bennett, Gottesman, Rock, & Cerullo, 1993; Gerber & Semmel, 1984), teacher-reported achievement also was used as an indicator of participants' academic success. In Years 1-2, teachers were asked to complete the 5-item Academic Competence Scale of the Teacher Social Competence Scale by Fast Track (Lochman & CPPRG, 1995). Their responses on this scale were coded on a 6-point Likert-type scale ranging from 1 (Almost Never) to 6 (Almost Always). Only two of the five items in the Academic Competence scale assessed teachers' perceptions of achievement on specific reading and math subjects; the remaining three items assessed goal-setting, turning in assignments, and broad abilities. Only the two achievement items were included in the study. In Year 3, two additional items of teacher-reported achievement were obtained by asking teachers to evaluate participants' reading and math abilities relative to peers. Responses were coded on a 4-point Likert-type scale ranging from 1 (Below Average) to 3 (Above Average), and an option to indicate uncertainty (4; Not Sure).

Parental expectations. Parental expectations were obtained through a parent questionnaire given at Year 1 and every year thereafter. In this questionnaire, parents were asked to answer the following question, "What do you expect will be the highest

level of education that your child will complete?" and were given ten possible responses, from (1) elementary school to (5) vocational/trade school to (10) Ph.D., MD, or equivalent.

Procedures

Students' demographic information (e.g., age, gender, race/ethnicity, and familial economic adversity status in first grade) was obtained from demographic forms and school district records. Between the months of October to May during participants' first grade school year, trained research staff individually administered tests of academic achievement to participants, and reassessed them every year thereafter. Children identified by the schools as an English language learner or speaking some Spanish were administered the Woodcock–Muñoz Language Survey (WMLS; Woodcock & Muñoz-Sandoval, 1993) to determine if they were more proficient in Spanish than English. Children who were more proficient in Spanish were tested in Spanish until their English language proficiency scores were equal or higher than scores in Spanish for at least two years. Research staff members who administered these measures were undergraduate and graduate students who were trained in test administration for approximately 20 hours prior to testing. All assessors received additional training until they were able to demonstrate their proficiency in administration procedures. All test protocols were checked twice for accuracy by a doctoral student and an undergraduate research assistant.

During the spring semester of participants' first, second, and third years in the study, parents were sent questionnaires to measure various dimensions of the home

environment, including parent education level, family size, and parents' beliefs on the highest level of education that their child would obtain. Parents received compensation for completing and returning the questionnaire. Around the same time each year, teachers were sent questionnaires regarding each participant in his/her classroom. These questionnaires tapped into several domains including aspects of social/behavioral adjustment, quality of relationships, and parental involvement. Teachers were compensated for completing the questionnaire.

CHAPTER IV

RESULTS

Data Analyses

The current study employed statistical analyses including descriptive statistics, correlations, confirmation factor analyses (CFA), *t*-tests, and autoregressive and cross-lagged path modeling. Descriptive analyses were conducted to obtain characteristics of the participants, including gender, language proficiency status, and familial economic adversity status. Correlational analyses indicated the strength of the association between concurrent achievement and parental expectations, as well as the relationships of each dependent variable (i.e. standardized reading and math scores, teacher-reported achievement, parental expectations) across the three different time points. Confirmatory factor analyses evaluated the fit of the two-factor measurement model of standardized (i.e., WJ-III ACH Reading, WJ-III ACH Math) and teacher-reported academic achievement (i.e., three items from Academic Competence Scale, two additional items in Year 3) as construct variables. CFA was also used to test whether these two constructs could be combined into a one-factor model of achievement. *T*-tests were used to compare the differences and test for statistical significance between the sample included in and excluded from the study, between female and male student participants, and to compare levels of parental expectations between ELLs and non-ELLs. While all continuous variables were entered, dichotomous variables (e.g., gender, familial economic adversity status) were coded by dummy coding, as suggested by Cohen, Cohen, West, and Aiken (2003).

Cross-lagged and autoregressive path modeling, two techniques within the structural equation modeling (SEM) framework, were utilized to test causal associations between parental expectations and students' academic achievement over time. Cross-lagged path modeling is a statistical method that allows for inferences to be examined over time while accounting for other variables in the model (Mayer & Carroll, 1988; Singer & Willett, 2003). Multiple-group analyses tested whether differences were present for female and male participants. Autoregressive techniques were included in the path model to assess the effect of both earlier and later achievement on parental expectations, as well as the effects of parental expectations on achievement. All path modeling analyses were conducted using M*plus* (version 7.3; (Muthén & Muthén, 2010) using full information maximum-likelihood estimations (FIML) to account for partially incomplete data. Full information maximum-likelihood (FIML) addresses analyses with missing data by using all available participant data to estimate likelihood functions for each individual (Enders, 2010).

Confirmatory Factor Analyses

Prior to further analyses, it was necessary to ensure that the indicators of achievement conjointly reflect similar information about students' performance. Because this study is primarily focused on the relationship between parental expectations and a single broad construct of achievement, it is important to verify the measures are consistent with each other and are not, in fact, measuring multiple constructs. Confirmatory Factor Analyses (CFA) were conducted to evaluate whether the Broad W scores obtained from the Woodcock-Johnson Tests of Achievement, Third Edition (WJ-

III ACH; Woodcock et al., 2001), three items from the Academic Competence Scale of the Teacher Social Competence Scale by Fast Track (Lochman & CPPRG, 1995), and additional teacher-reported achievement items collected in Year 3 fit a two-factor measurement model of standardized and teacher-reported achievement. The two-factor model (i.e., standardized, teacher-reported achievement) was compared to a one-factor model of achievement to identify the best factor structure for subsequent analyses. In order to establish the best fitting model of achievement, the following CFA were conducted separately across the three assessment periods: Model 1: one-factor model with WJ-III ACH Broad Reading and Math scores, Academic Competence Scale (3 items), and additional teacher-reported achievement (two items) collected in Year 3; Model 2: two-factor model of standardized and teacher-reported achievement. Fit was assessed using the following indices: Chi-square difference test, Root Mean Square of Approximation (RMSEA), Standardized Root Mean Square Residual (SRMR), Comparative Fit Index (CFI), and Tucker Lewis Index (TLI).

Initial CFA analyses indicated poor fit indices across both one- and two-factor models (i.e., $\chi 2<0.05$, RMSEA > 0.08, SRMR>0.05, TLI<0.90, CFI<0.90); therefore factor loadings for each of the achievement measures were examined to decide whether extraction was needed to improve model structure fit. Utilizing the suggested .45 factor loading cutoffs by Comrey and Lee (1992), two achievement indicators were removed from the one- and two-factor models: Year 3 teacher-reported achievement for reading (.058 and .380, respectively) and math (.047 and .308, respectively). Additional CFA

analyses were conducted to examine fit without the two indicators. The fit indices for both models are shown in Table 2.

As seen in Table 2, the two-factor structure of academic achievement had a good fit for the data. The two-factor model demonstrated good fit with Year 1 (χ^2 (4) = .212, RMSEA = .040, SRMR = .012, CFI = .998, TLI = .995) and Year 3 (χ^2 (4) = .225, RMSEA = .040 (.000 - .107), SRMR = .014, CFI = .997, TLI = .993). Although Year 2 had a mediocre fit with a Root Mean Square of Approximation (RMSEA) between 0.08 and 0.10 (Steiger, 1990; Browne & Cudeck, 1993), overall the model was an adequate fit. The two-factor model had better fit indices than the one-factor achievement model. Thus, it was determined that subsequent analyses would include the achievement indicators in the modified CFA analyses, and not include the two additional teacher-reported achievement items at Year 3. Based on the poor fit from the one-factor model, future analyses would use the two-factor model (i.e., standardized, teacher-reported achievement) to assess the relationship between achievement and parental expectations.

Table 2
Factor Loadings of the One- and Two- Factor Models of Academic Achievement

Model	Df	χ^2	RMSEA	SRMR	CFI	TLI
Model 1 (Two Factor Model of Achievement)						
WJ-III ACH Broad Reading and Math W Scores						
Year 1	4	.212	.040 (.000-.104)	.012	.998	.995
Year 2	4	.063	.094 (.045-.149)	.028	.985	.961
Year 3	4	.225	.040 (.000-.107)	.014	.997	.993
Model 2 (One Factor Model of Achievement)						
WJ-III ACH and Teacher-Reported Achievement						
Year 1	2	.006	.120 (.054-.196)	.037	.980	.940
Year 2	2	.001	.109 (.063-.159)	.036	.976	.953
Year 3	2	.130	.052 (.000-.109)	.023	.994	.989

Note. Chi-square difference test: χ^2. Root Mean Square of Approximation: RMSEA, Standardized Root Mean Square Residual: SRMR. Comparative Fit Index: CFI. Tucker Lewis Index: TLI.

Research Question One

What is the degree of association between parental expectations and achievement (measured by teacher-reported and standardized measures) for Hispanic students in Project Achieve at concurrent points in time? The study hypothesized moderate correlations between the variables of interest at concurrent time points. The correlations, means, standard deviations, and percentages of missing data for WJ-III ACH Broad Reading and Math scores, teacher-reported achievement from the Academic Competence Scale, and parental expectations across the three time periods are presented in Table 3. Table 4 displays the correlations, means, standard deviations, and percentages of missing data for the standardized and teacher-reported achievement constructs (respectively), along with parental expectations, and covariates (i.e., gender, familial economic adversity status). Variables were screened for normality and were within the normal range according to the cutoff values of 2 for skewness and 7 for kurtosis (West, Finch, & Curran, 1995).

In Year 1, only teacher-reported rating on reading ($r(277) = .14$, $p = .04$) and math scores on the WJ-III ACH ($r(258) = .14$, $p = .05$) were found to have statistically significant correlations with parental expectations. Correlational analyses indicated that parental expectations were not correlated with any of the academic achievement indicators in Year 2. In Year 3, both reading ($r(194) = .14$, $p = .05$) and math scores ($r(194) = .25$, $p < .01$) from the WJ-III ACH and teacher-reported ratings on reading achievement ($r(194) = .21$, $p < .01$) were correlated with parental expectations. These findings demonstrate inconsistency in the relationship between parent educational

expectations with teacher's perception on academic abilities and standardized achievement scores.

As depicted in Table 4, the relationship between parental expectations with concurrent standardized achievement and teacher-reported assessments also varied over time. Parental expectations assessed in Year 1 were only significantly correlated with teacher-reported achievement ($r(197) = .15$, $p = .04$). Similar to the findings between specific measures and parental expectations, the relationship between achievement and expectations was insignificant in Year 2. Correlations with parental expectations in Year 3 did reach statistical significance with both WJ-III ACH Broad scores at Time 3, $r(194) = .25$, $p < .01$, and teacher-reported achievement, $r(194) = .21$, $p < .01$. These findings do support the hypothesis that parental expectations become more consistent with, and thus more highly correlated with, levels of student achievement over time (despite some noted discrepancies in Year 2). Furthermore, the correlates between parental expectations and the various achievement indicators were all in the positive direction across the three assessment periods, and were therefore generally consistent with previous research findings.

Table 3
Correlations Between Covariates, Reading, Math, and Parental Expectations T1-T3

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
COVARIATES																					
1	GENDER	1																			
2	ECON	.09**	1																		
WJREAD																					
3	WJREAD1	-.10	.08	1																	
4	WJREAD2	-.12	.03	.67**	1																
5	WJREAD3	-.11	-.01	.59**	.78**	1															
WJMATH																					
6	WJMATH1	-.05	-.23**	.25**	-.04	-.001	1														
7	WJMATH2	.06	-.20**	.12	.04	.10	.63**	1													
8	WJMATH3	.07	-.19**	.28**	.21**	.28**	.57**	.69**	1												
TRREAD																					
9	TRREAD1	-.03	-.05	.56**	.50**	.55**	.19**	.24**	.36**	1											
10	TRREAD2	-.08	-.02	.35**	.37**	.47**	.22**	.21**	.21**	.50**	1										
11	TRREAD3	-.10	.03	.29**	.32**	.47**	.28**	.24**	.36**	.42**	.54**	1									
TRMATH																					
12	TRMATH1	.01	-.03	.46**	.41**	.44**	.21**	.26**	.32**	.83**	.45**	.38**	1								
13	TRMATH2	.04	-.06	.23**	.17**	.29**	.31**	.33**	.29**	.37**	.78**	.39**	.40**	1							
14	TRMATH3	-.05	.07	.26**	.26**	.41**	.29**	.31**	.36**	.39**	.44**	.77**	.39**	.41**	1						
TROVR																					
15	TROVR1	-.06	-.04	.55**	.49**	.54**	.17**	.20**	.36**	.92**	.53**	.43**	.84**	.40**	.36**	1					
16	TROVR2	-.07	-.03	.35**	.30**	.43**	.28**	.22**	.21**	.48**	.90**	.52**	.44**	.81**	.45**	.52**	1				
17	TROVR3	-.19**	.09	.31**	.35**	.51**	.28**	.28**	.33**	.49**	.53**	.33**	.43**	.40**	.80**	.43**	.53**	1			
PE																					
18	PE1	.07	-.20**	-.03	-.01	-.03	.15*	.09	.23**	.14*	.09	.09	.14	.76**	.68**	.09	.04	.14**	1		
19	PE2	-.09	-.17**	.002	.06	.07	.04	.10	.17**	.13	.02	.11	.12	-.03	.01	.10	-.06	.19**	.76**	1	
20	PE3	-.08	-.13	.12	.12	.14*	.14*	.13	.25**	.19**	.15**	.21**	.16**	.09	.12	.16**	.09	.12	.68**	.84**	1

Note. GENDER = children's gender (covariate; 1 = male; 0 = female). ECON = children's economic adversity status at grade 1 (covariate; 1 = economically disadvantaged; 0 = not economically disadvantaged). WJREAD = reading achievement (WJ-III ACH or Batería Woodcock-Muñoz Pruebas de Aprovechamiento – Revisada (Batería-R Broad Reading W score). WJMATH = math achievement (WJ-III ACH Broad Math W score). PE = parental expectations.
* $p < .05$; ** $p < .01$

Table 4
Correlations Between Covariates, Achievement, and Parental Expectations T1-T3

			1	2	3	4	5	6	7	8	9	10	11
COVARIATES													
	1	GENDER	1										
	2	ECON	0.14**	1									
WJACH													
	3	WJACAD1	-0.01	-0.02	1								
	4	WJACAD2	-0.08	-0.05	0.62**	1							
	5	WJACAD3	-0.06	-0.10	0.58**	0.78**	1						
TRACH													
	6	TRACAD1	-0.01	-0.05	0.53**	0.54**	0.58**	1					
	7	TRACAD2	-0.08	-0.03	0.38**	0.38**	0.44**	0.51**	1				
	8	TRACAD3	-0.08	-0.03	0.38**	0.39**	0.54**	0.46**	0.55**	1			
PE													
	9	PE1	0.08	-0.21**	0.04	0.04	0.14**	0.15**	0.08	0.07	1		
	10	PE2	-0.08	-0.19**	0.04	0.11	0.17**	0.14**	0.01	0.11	0.77**	1	
	11	PE3	-0.08	-0.16**	0.18**	0.18**	0.25**	0.19**	0.13	0.21**	0.68**	0.84**	1
		N	291	282	279	258	249	260	221	202	199	216	196
		Mean	0.52	0.82	438.81	465.36	479.66	4.14	4.27	3.95	3.97	4.25	3.84
		SD	0.50	0.39	19.21	13.10	12.09	1.40	1.28	1.38	2.42	2.31	2.16
		Missing (%)	0.68	3.75	4.78	11.95	15.02	11.26	24.57	31.06	32.08	26.28	33.11

Note. GENDER = children's gender (covariate; 1 = male; 0 = female). ECON = children's economic adversity status at grade 1 (covariate; 1 = economically disadvantaged; 0 = not economically disadvantaged). WJACH= academic composite from WJ-III or Batería-R. TRACH = teacher-rated achievement from Academic Competence Scales. PE = parental expectations.
* $p < .05$; ** $p < .01$

Research Question Two

To what extent do Hispanic ELLs differ on the dimensions of parental expectations from non-ELL Hispanics? It was hypothesized that parents of ELLs would have higher initial levels (Time 1) of educational expectations, but that these differences would decrease over time at a higher rate in response to the academic difficulties encountered by ELLs early on. Because of this study's focus on the differences between English- and Spanish-dominant students, data were analyzed to assess the participants' language status at every year of assessment. In addition to the achievement and parental variables, covariates of socioeconomic status and gender were included in the analyses.

Results from the t-tests comparing averages of each indicator across Years 1-3 are displayed in Table 5. There were no statistically significant differences noted in Year 1 between parental expectations for ELL and non-ELL students. Notably, significant differences in teacher-reported achievement suggests teachers gave higher ratings to ELLs than non-ELLs ($t(86) = 2.09$, $p = .04$). As predicted, non-ELL parents reported higher levels of educational expectations in Year 2 ($t(60)= -2.19$, $p = .03$), and Year 3 ($t(54)= -2.19$, $p = .03$). These differences occurred despite the fact that ELLs outperformed their English-dominant counterparts on the Woodcock-Johnson Tests of Achievement in Year 2 ($t(82) =16.00$, $p <.01$) and Year 3 ($t(79)=3.79$, $p <.01$). The latter findings were surprising considering the additional academic risk factors associated with limited English proficiency.

Differences in parental expectations between the two groups reached significant levels in Year 2 ($t(59) = -2.19$, $p =.03$), and Year 3 ($t(53)=2.19$, $p =.03$), indicating

higher levels of educational achievement by parents of non-ELL Hispanics. Furthermore, parental expectations for both groups stayed consistent over time; on average, parents of English dominant students expected their child to earn a 4-year degree whereas parents of ELLs expected their child to obtain an associate degree.

Table 5
Means, Standard Deviations, and Sample Sizes for English Language Learners (ELLs) and non-ELLs

	ELL (*N* = 99)		**Non-ELL** *(N* = 194)		***t***	***P***
Variable	**Mean (SD)**	**N**	**Mean (SD)**	**N**		
YEAR 1 (N = 291)	**ELL** (34.02%)	99	**Non-ELL** (65.98%)	194		
GENDER	.54 (.50)	99	.52 (.50)	194	0.32	0.75
AGE	6.54 (.36)	99	6.59 (.40)	194	-0.97	0.33
ECON	.99 (.10)	97	.73 (.45)	185	7.65	<0.001**
WJACH1	452.55 (24.70)	92	447.44 (15.55)	187	1.82	0.07
TRACH1	4.40 (1.40)	87	4.02 (1.37)	173	2.09	0.04*
PE1	6.97 (2.72)	60	7.53 (2.26)	139	-1.41	0.16
YEAR 2 (N = 279)	**ELL** (31.89%)	89	**Non-ELL** (68.11%)	190		
WJACH2	474.61 (10.94)	84	447.60 (15.70)	173	16.00	<0.001**
TRACH2	4.24 (1.12)	65	4.29 (1.41)	154	-0.27	0.79
PE2	6.85 (2.76)	61	7.71 (2.02)	146	-2.19	0.03*
YEAR 3 (N = 270)	**ELL** (31.48%)	85	**Non-ELL** (68.52%)	185		
WJACH3	486.12 (10.68)	81	480.36 (12.29)	168	3.79	<0.001**
TRACH3	4.21 (1.42)	62	3.83 (1.35)	133	1.79	0.08
PE3	6.96 (2.49)	55	7.79 (1.95)	134	-2.19	0.03*

Note. GENDER = children's gender (1 = male; 0 = female). ECON = children's economic adversity status (1 = economically disadvantaged; 0 = not economically disadvantaged). WJACH= academic composite from Woodcock-Johnson Tests of Achievement, Third Edition or Batería Woodcock-Muñoz Pruebas de Aprovechamiento–Revisada. TRACH= teacher-rated achievement from Academic Competence Scales. PE = parental expectations.
* $p < .05$; ** $p < .01$

Research Questions Three

Do parental expectations predict or account for variance in student's academic achievement over time based on student prior academic performance for ELL and non-ELL Hispanic participants? It was hypothesized that students' parental expectations

would predict changes in academic achievement in the subsequent years for both groups, but that previous academic achievement would also predict future parental expectations. Because the results from the confirmatory factor analysis did not support a unidimensional model of academic achievement, the focus of this research question was modified to examine effects by indicator source (i.e., standardized, teacher-reported) instead of utilizing a single construct of achievement.

Regression coefficients for the cross-lagged, autoregressive analyses are presented in Table 6. Regression coefficient estimates indicate that previous scores on the Academic Competence Scale, Woodcock-Johnson Tests of Achievement, and parental expectations predicted future achievement ratings/scores for both ELL and non-ELL Hispanic students when previous variables, including achievement scores, are controlled. When prior results are controlled for, both scores and ratings were highly predictive of future scores across the two time-lags (i.e., T1 to T2, T2 to T3). More importantly, only two achievement-expectations pathways were supported: teacher-reported achievement at Year 2 significantly predicted parental expectations at Year 3 (β = .12, p = .02) and parental expectations at Year 2 significantly predicted standardized achievement at Year 3 (β = .11, p = .04). When previous scores were held constant, there were no statistically significant relationships between achievement and parental expectations between Years 1 and 2. Moreover, these findings do not consistently support the influence of teacher-reported or standardized achievement scores on parental expectations, or vice versa.

Additional regression coefficients to account for differences between males and females are presented in Table 7. Similar to the previous analyses, both standardized and teacher-reported achievement were found to be important predictors of future scores/ratings for both genders, even after accounting for prior scores. Notably, results did reveal that teacher-reported achievement of male participants at Year 2 was a significant predictor of parental expectations at Year 3 ($\beta = .24$, $p = .04$), after accounting for previous variables, including prior parental expectations. The relationship was also bidirectional; after all prior scores were accounted for, parental expectations of male participants' at Year 2 predicted teacher-reported achievement one year later ($\beta = .11$, $p = .04$). When remaining variables were accounted for, no significant pathways between parental expectations and academic achievement were found for female participants.

Table 6
Standardized Coefficients on Autoregressive Effects Between Parental Expectations (PE) and Achievement (ACH) for English Language Learners (ELL) and non-ELL Hispanic Students

	ELL ($N = 43$)	Non-ELL ($N = 120$)
Standardized		
PE (T1) --> ACH (T2)	.20 (.11)	-.03 (.07)
ACH (T1) --> PE (T2)	.29 (.16)	-.03 (.06)
ACH (T1) --> ACH (T2)	.70** (.08)	.70** (.05)
PE (T2) --> ACH (T3)	.09 (.10)	.12 (.07)
ACH (T2) --> PE (T3)	-.07 (.10)	.04 (.05)
ACH (T2) --> ACH (T3)	.73** (.08)	.75** (.05)
Teacher-Reported		
PE (T1) --> ACH (T2)	-.08 (.17)	.08 (.09)
ACH (T1) --> PE (T2)	-.18 (.17)	.01 (.07)
ACH (T1) --> ACH (T2)	.40** (.15)	.57** (.07)
PE (T2) --> ACH (T3)	.07 (.15)	.18 (.10)
ACH (T2) --> PE (T3)	.20* (.09)	.09 (.06)
ACH (T2) --> ACH (T3)	.64** (.12)	.43** (.10)
Parental Expectations		
PE (T1) --> PE (T2)	.77** (.09)	.79** (.04)
PE (T2) --> PE (T3)	.83** (.06)	.85** (.03)

* $p < .05$; ** $p < .01$

Table 7
Regression Coefficients on Autoregressive Effects Between Parental Expectations (PE) and Academic Achievement (ACH) for Females and Males

	Females	Males
Standardized		
PE (T1) --> ACH (T2)	.03 (.11)	.11 (.08)
ACH (T1) --> PE (T2)	.04 (.09)	.02 (.08)
ACH (T1) --> ACH (T2)	.51** (.09)	.69** (.06)
PE (T2) --> ACH (T3)	.11 (.09)	.09 (.06)
ACH (T2) --> PE (T3)	.08 (.08)	-.07 (.06)
ACH (T2) --> ACH (T3)	.63**(.07)	.85** (.04)
Teacher-Reported		
PE (T1) --> ACH (T2)	-.08 (.09)	.08 (.11)
ACH (T1) --> PE (T2)	.06 (.09)	-.07 (.08)
ACH (T1) --> ACH (T2)	.62** (.07)	.55** (.09)
PE (T2) --> ACH (T3)	-.03 (.11)	.24* (.11)
ACH (T2) --> PE (T3)	.15 (.09)	.11* (.05)
ACH (T2) --> ACH (T3)	.64** (.10)	.34** (.11)
Parental Expectations		
PE (T1) --> PE (T2)	.75** (.05)	.80** (.05)
PE (T2) --> PE (T3)	.75** (.05)	.90** (.03)

* $p < .05$; ** $p < .01$

Research Question Four

If teacher-reported and standardized achievement measures support a one-factor achievement model, would the relationship between parental expectations and academic achievement vary by indicator? It was theorized that a stronger relationship would be found between parental expectations and teacher-reported achievement (compared to standardized achievement), but this was not consistently supported by the data. The

regression coefficient estimates indicate that previous scores on the Academic Competence Scale, Woodcock-Johnson Tests of Achievement, and parental expectations predicted future achievement ratings/scores. Both teacher-reported and standardized achievement were also predictors of future scores across the two time lags (i.e., T1 to T2, T2 to T3). Only two of the other four interaction pathways were supported: teacher-reported achievement at Year 2 significantly predicted parental expectations at Year 3 (β = .12, p = .02) and parental expectations at Year 2 predicted standardized achievement at Year 3 (β = .11, p = .04). No additional evidence supported the link between achievement and parental expectations between Years 1 and 2.

Table 8
Regression Coefficients on Autoregressive Effects Between Parental Expectations (PE) and Academic Achievement (ACH), Measured by Standardized (WJ-ACH) and Teacher-Reported (TR-ACH) Measures.

		WJ-ACH β	TR-ACH β	PE β
Pathways				
	PE (T1) --> ACH (T2)	.02 (.06)	.06 (.08)	
	PE (T1) --> PE (T2)			.76** (.04)
	ACH (T1) --> PE (T2)	.08 (.06)	-.03 (.06)	
	ACH (T1) --> ACH (T2)	.67** (.05)	.53** (.06)	
	PE (T2) --> ACH (T3)	.11** (.05)	.14 (.08)	
	PE (T2) --> PE (T3)			.84** (.03)
	ACH (T2) --> PE (T3)	.004 (.05)	.12** (.05)	
	ACH (T2) --> ACH (T3)	.75** (.04)	.47** (.08)	

* p < .05; ** p < .01

CHAPTER V

CONCLUSION

Although research has established the importance of parental expectations on student academic achievement, these findings have often been clouded with measurement issues (e.g., lack of longitudinal studies), selective focus on the unidirectional influences rather than bidirectional relationships, and non-Hispanic samples with English language learners (ELLs) and non-ELL participants. Utilizing data from a longitudinal study examining the effects of grade retention on academic achievement, this study sought to answer the following four questions: 1) What is the degree of association between parental expectations and achievement (measured by teacher-reported and standardized measures) for Hispanic students at concurrent points of time, 2) do differences exist in levels of parental expectations (PE) between English language learners (ELLs) and non-ELL Hispanic participants, 3) will PE predict or account for variance in student's academic achievement in ELL and non-ELL students, and 4) does the relationship between academic achievement and PE varies based on the two indicators of academic achievement (i.e., standardized and teacher-reported)?

Results of a preliminary CFA analysis indicated a one-factor model of academic achievement resulted in poor fit, whereas the two-factor model (i.e., standardized and teacher-reported indicators) demonstrated better fit with the data, and was therefore used for subsequent analyses. This is a surprising finding given that many related studies (Fan & Chen, 2001; Hill et al., 2004; Wilder, 2014) have utilized a one-factor achievement model, even if multiple indicators were used. Possible reasons include

significant discrepancies in score ranges and the extraneous influences of other factors on teachers' perceptions of student achievement (Ladd, Birch, & Buhs, 1999; Pianta & Stuhlman, 2004; Silver, Measelle, Armstrong, & Essex, 2005). Thus, the relationship between the two indicators of achievement and parental expectations were evaluated separately and not together as one broad construct of achievement, as originally proposed by the first research question.

Of the demographics included in this study, it was noted that students categorized as English language learners were more likely to come from economically disadvantaged homes than their non-ELL peers. This finding was supported by the literature indicating that, amongst Hispanics, ELLs are disproportionally more likely to live below federal poverty guidelines (Capps et al., 2005; Grantmakers for Education, 2013; Rumbaut, 1995). This is likely influenced by immigration status, given the majority of ELLs are first- and second-generation immigrants, whose parents have little to no formal education (Capps et al., 2005).

Descriptive analyses and t-tests also found differences in standardized academic achievement between ELL and non-ELL Hispanic participants. ELLs obtained higher scores on the WJ-III ACH than non-ELL counterparts in Years 2 and 3, with scores at Year 1 approaching statistical significance. These results are unexpected given the literature supporting higher rates of academic failures among ELLs (Chapman et al., 2011; NCES, 2013; Perie, Grigg, & Donahue, 2005; Ream & Rumberger, 2008; Rumbaut, 1995). An analysis of the same longitudinal database by Wilson and Hughes (2006) found that testing language (i.e., language dominance) coincided with placement

in bilingual education, with 99% of Hispanics in non-bilingual classrooms scoring higher in the English language skills. Ninety-nine percent of the Spanish-dominant sample participated in bilingual education, demonstrating higher levels of language and literacy proficiency than the non-ELL group. This suggests that ELLs benefitted from instruction in their home language to further promote existing language and literacy skills instead of focusing more on acquiring a new language. These findings validated the importance of using students' home language to teach early reading in order to promote early school success (August, Carlo, Dressler, & Snow, 2005; Nagy, Mclure, & Montserrat, 1997).

Although it was hypothesized that parent expectations would be higher among groups with higher overall achievement scores, parental expectations were lower for ELLs than the non-ELL group (the latter whom had lower standardized academic scores). These differences were only significant in Years 2 and 3, but were not anticipated considering the extensive literature linking student achievement with parental expectations. Studies that suggest parents' perception of student academic progress is influenced by mastery of the English language (Piotrkowski, Botsko, & Matthews, 2000) may provide an explanation to this discrepancy between achievement and parental expectations. These findings support that levels of parental expectations are different between parents of ELLs and non-ELLs, regardless of their students' actual knowledge. Another noteworthy finding was the differences in beliefs for academic attainment between these two groups. On average, parents of Spanish-dominant ELLs expected

them to complete a 2-year degree (or equivalent), whereas parents of the non-ELL group had expectations of a 4-year degree (or equivalent).

Surprisingly, concurrent scores/ratings on standardized achievement, teacher-reported achievement, and educational expectations were inconsistently correlated with each other. Only parental expectations and teacher-reported achievement were significant in Year 1, whereas no significance findings were supported in Year 2. Year 3 data indicated that parental expectations were significantly related to standardized and teacher-reported achievement scores and suggests the relationships between achievement and expectations may improve over time. Given the overall weaker fit of the data in Year 2, this is a possible consideration for the lack of significance. Furthermore, all were positively correlated, demonstrating change in the same direction over time. Generally, students' expectations, parents' expectations, and academic achievement were relatively stable across time, replicating a finding in the study by Zhang et al. (2011).

Results from the longitudinal autoregressive, cross-lagged analyses revealed limited findings that varied based on gender, type of achievement measure, and year of assessment. Overall, Hispanic children's previous level of teacher-reported achievement in Year 2 was significantly predictive of parental expectations ratings one year later, after prior variables were controlled for. The reverse pathway was also significant, but only for the standardized achievement measure. Together these findings indicate teachers' perception of academic standing at Year 2, likely conveyed to parents through report cards, does influence their expectations of students' academic attainment. This

relationship occurs in tandem with parental expectations influencing standardized achievement in the next assessment period, which may be mediated by changes in children's expectations (Yamamoto & Holloway, 2010), and academic self-efficacy (Benner & Mistry, 2007; Eccles & Wigfield, 2002; Eccles et al., 1998).

After controlling for prior values of achievement and expectations, there was one bidirectional relationship between achievement and parental expectations in this study: teacher-reported ratings among Hispanic male participants between Years 2 and 3. These findings provide additional support for Zhang et al. (2011), who found evidence for this gender-specific directionality relationship between the two constructs, and suggests gender also plays a role in the interactions between achievement and parental expectations. This is consistent with a stereotype that parents place more emphasis on their son's education rather than their daughter's (Lundberg, 2005; Smith, 1992) partially due to parents' unintentional response to gender wage differentials rather than unequal concern for sons and daughters (Behrman & Taubman, 1986). Specific to the bidirectional analyses of interest, the analyses presented mixed findings of the bidirectionality between parental expectations and achievement, with only one of the two time lags statistically significant, but only for certain groups and indicators of achievement.

Implications

Despite not having fully supported the hypotheses predicted in this study, there are several implications from this study examining causal relationships between parental expectations and academic achievement. First, current results provide some evidence

that previous academic achievement predicts later parental expectations. The outcomes were most strongly supported by teacher-rated achievement than by standardized achievement, which points to the importance of academic feedback (i.e., grades on report card). These findings suggest school psychologists can provide in-service training to bring awareness about discrepancies between standardized and teacher-reported achievement measures, while educating them about the impact of their ratings and its influence on achievement through various pathways. Based on the finding that effects varied by sex, it is also suggested that parental involvement programs and teacher training address these differences of how they interpret and the implications of their behavior on each gender's future achievement.

Given the lack of literature about the influence of parents on academic achievement of Hispanic youth, in addition to the lack of direct assessment of educational expectations, it appears that more research is needed within these areas. It is hoped that the results from this dissertation will encourage future research to gain a better understanding of both ELL and non-ELL Hispanic underachievement. Specifically, school psychologists, school administration, and educational stakeholders should continue to identify potential factors and alternative pathways that affect the underachievement of Hispanic youth.

Limitations

Though this dissertation strengths in its use of a longitudinal database with multiple indicators of achievement and annual assessments of parental expectations, there are several limitations to consider when interpreting its findings. Because the

larger longitudinal study included academically at-risk participants from two school districts in Southwest Texas, these findings may not reflect the Hispanic population as a whole. The majority of Hispanics in the state of Texas are of Mexican descent, which is not true in every state with large Hispanic populations, like Florida and New York (Ennis et al., 2011; Humes et al., 2011). Additionally, the current study focused on the interaction between parental expectations and academic achievement, but did not explore other potential factors, such as teacher's educational expectations or parents' generational status. Even after accounting for mother's expectations, Benner and Mistry (2007) found teacher expectations influenced youth's educational expectations, competency beliefs, and achievement outcomes. It is encouraged that alternative models incorporate these factors to examine their role in the existence of causal pathways between parental expectations and achievement.

Furthermore, this dissertation did not examine the influence of socioemotional characteristics on teachers' perception of student achievement. Previous research suggests that teachers' judgments of academic competency are influenced by teacher-child relationships and behavioral perceptions, including prosocial behaviors, motivation, and effort (Borko & Putnam, 1996; Hughes, Luo, Kwok, & Loyd, 2008; Nurmi, 2012). A meta-analysis on socioemotional characteristics and student-teacher relationships by Nurmi (2012) found evidence to support a relationship between both motivation and effort on child-teacher relationships, the latter which has been known to influence teacher's perception of achievement (Ladd, Birch, & Buhs, 1999; Pianta & Stuhlman, 2004; Silver et al., 2005). Therefore, it is possible that students'

socioemotional characteristics, including motivation and effort, influenced the teacher-reported achievement measure. Considering that the WJ-III ACH and Batería-R are more objective indicators of achievement (and less likely to be influenced by socioemotional characteristics), this may explain the discrepancies found between standardized and teacher-reported achievement scores that resulted in analyses being conducted using a 2-factor model. Future research should attempt to include socioemotional data to clarify its influence on teacher-reported achievement.

The restricted relationships between parental expectations, standardized achievement, and teacher-reported academic achievement may have been due to limitations of the Woodcock-Johnson Tests of Achievement, Third Edition (WJ-III ACH) and Batería Woodcock-Muñoz Pruebas de Aprovechamiento – Revisada (Batería-R). One of the most common limitations of standardized achievement measures such as the WJ-III ACH and Batería-R is the lack of congruency between standardized tests and educational curriculums (Deno, 1985; Willingham, Pollack, & Lewis, 2002). The different curricular and learning situations may explain the discrepancies between standardized achievement and both teacher-reported achievement and parental expectations (which is influenced by teacher feedback). It is suggested that future studies utilize additional achievement measure more closely linked to the school curriculum (e.g., curriculum-based measures) in future research. Curriculum-based measures (CBMs) also offer more sensitivity when monitoring students' growth over time than standardized achievement tests (Deno, 1985; Deno, 2003; Willingham, Pollack, & Lewis, 2002). Lastly, the low correlations between these three constructs

may also have been due to the unfamiliar test administrations that are typically unfamiliar to young children (Kaufman, 1979).

This study also presented a number of measurement issues. Because the item measuring parental expectations was researcher-developed, it is unknown how well it accurately measured parental expectations. However, there are no validated measures available to date that assess this variable, thereby making it difficult to compare the findings to those from other studies. It is possible that the item (and the Likert responses) may be over- or under-estimating the parents' true expectations. In addition, and as previously mentioned, the teacher-reported achievement measure introduced in Year 3 had a limited set of responses (i.e., below average, average, above average), which may have resulted in a lack of sensitivity of the measure. Existing research suggests that scales with few response categories have less reliability (Weng, 2004), validity, and discriminating power (Preston & Colman, 2000). This may have contributed to its poor fit with other achievement indicators, and its removal from the data to improve model fit.

Future Directions

This study focused on causal relationships between parental expectations and student academic achievement. Due to the scope of the study, the beliefs of other individuals, including those of teachers and students, were not examined. Further research should target the influence of additional variables such as teacher expectations, parent expectations, and academic self-efficacy in order to pinpoint academic predictors and specific grade levels that could be the focus of intervention for this at-risk

population. This study should also be replicated using a larger sample and a more nationally representative population of Hispanic students. This will ensure that findings from this study are accurate and generalize to the target population. Furthermore, future studies should include more heterogeneous samples with regard to SES and academic risk in order to determine the generalizability of results.

Future research should also investigate the relationship between the researcher-developed measures utilized in this study and actual parental expectations. By validating these measures, future studies can provide support or discredit the expectancy measures and the conclusions of studies that utilized such indicators. Furthermore, studies should continue to use longitudinal data to investigate the variables in this dissertation, beginning in preschool, to determine if previous academic achievement impacts expectations or vice versa.

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